

Work Order ID 136093

136093

Page 1

Friday, August 28, 2015 1:44:38 PM

Item ID: D044-715-011 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: R44 Cargo Mirror
 Start Date: 8/21/2015 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 8/28/2015 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: SA/LL 20150828 Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3243	Rev A
IIN-D044-715	Rev A

100	Document Control	0.00	DAS 6 9-89						DAS 02 9-89
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPD044-715-011		CHG003						SEP 28 2015

110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									SEP 15 2015 DAS 26 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
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Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
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Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

Picklist-Print

Friday, August 28, 2015 1:44:42 PM

Page 1

Work Order ID: 136093

136093

Parent Item: D044-715-011

D044-715-011

Parent Item Name: R44 Cargo Mirror

Start Date: 8/21/2015

Required Date: 8/28/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A04.02.18New issueKJ/JLM
IPP Rev:B 06-04-28 Manufactured on Water Jet JLM
IPP Rev:C 08-06-10 as per ECN1195p DD verified by:EC IPP Rev:D
11.05.04 remove FE-032-EF DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3243-041		Manufactured	No			110	Each	9.0000	1	1			
D3243-041													
Bracket	DAS 02 9-89												
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST248				2					
				132799				2					
				ST490				7					
				124529				3					
				133529				4					
D1048		Manufactured	No			110	Each	25.0000	2	2			
D1048													
Clamp	DAS 02 9-89												
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				25					
				132154				25					
D1049		Manufactured	No			110	Each	19.0000	2	2			
D1049													
Saddle	DAS 02 9-89												
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				19					
				115511				1					
				117825				18					

SEP 15 2015

DQA: _____ Date: _____



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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
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Picklist Print

Friday, August 28, 2015 1:44:43 PM

Page 2

Work Order ID: 136093

136093

Parent Item: D044-715-011

D044-715-011

Parent Item Name: R44 Cargo Mirror

Start Date: 8/21/2015

Required Date: 8/28/2015

Start Qty: 1.00

Required Qty: 1.00

D2010-104

Manufactured No

110

Each

2.0000

1

1

D2010-104 **DAS**
ARM 02
9-89

DAS **DAS**
27 26
9-89 9-89

Location

Loc Qty

Loc Code

ST351

2

124173

2

D2011-101

Manufactured No

110

Each

36.0000

1

1

D2011-101 **DAS**
Mirror 6" 02
9-89

DAS **DAS**
27 26
9-89 9-89

Location

Loc Qty

Loc Code

FG

2

106348

2

ST384

34

122000

16

135152

18

AN3-4A

Purchased No

110

Each

138.0000

4

4

AN3-4A
Bolt

DAS
02
9-89

DAS **DAS**
27 26
9-89 9-89

Location

Loc Qty

Loc Code

CA

110

m129682

110

ST350

28

m132317

28

AN526C1032R10

Purchased No

110

Each

57.0000

4

4

AN526C1032R10
Screw

DAS
02
9-89

DAS **DAS**
27 26
9-89 9-89

Location

Loc Qty

Loc Code

ST327

57

m138712

57

m133064

4

Friday, August 28, 2015 1:44:43 PM

Shop Packet Print

Page 2

DQA: _____ Date: _____



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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Friday, August 28, 2015 1:44:43 PM

Page 3

Work Order ID: 136093

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Parent Item: D044-715-011

D044-715-011

Parent Item Name: R44 Cargo Mirror

Start Date: 8/21/2015

Required Date: 8/28/2015

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130 AELS4-1032-130 Purchased No

AI S4-1032-130

Rivnut

**DAS
02
9-89**

ALS4-1032-130

Location

Loc Qty

Loc Code

st549

1060

M132954

1060

MB128649

4

NAS1149D0332J

Purchased

No

NAS1149D0332.J

Washer

**DAS
02
9-89**

Location

Loc Qty

Loc Code

CA

14

m129682

14

GA

548

m132677

548

ST269

1484

m130325

900

m131624

34

m132677

550

4

**DAS
27
9-89**

**DAS
26
9-89**

**DAS
27
9-89**

**DAS
26
9-89**

SEP 15 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

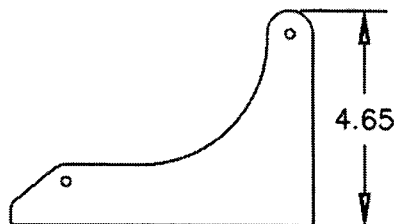
Work Order update only ☐

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		OTHER : ☐							



SA 136093 20150828

DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3243	REV. A SHEET 1 OF 1
DATE 04.01.09		TITLE BRACKET	SCALE 1:2
A	04.01.09	NEW ISSUE	



R0.188 (TYP)



D3243-1 BEND DETAIL/
D3243-041 ASSEMBLY
SCALE 1:4

RELEASED
04.02.03

INSTALL
FE-032-EF INSERTS
(4 PLACES)

2.75 ± 0.030
0.000

8.581
8.206
7.706

11.920
11.420

Ø0.201
(TYP 4
PLACES)

Ø0.290
(TYP 4
PLACES)

GRAIN
DIRECTION

1.375

5.273

3.714

**D3243-041 BRACKET ASSEMBLY
(D3243-1 BRACKET)**

- 1) MATERIAL: 6061-T6, 0.063 THICK
(QQ-A-250/11, REF DART SPEC
M6061T6S.063)
- 2) FINISH: CHEMICAL CONVERSION COAT
PER DART QSI 005 4.1
POWDER COAT BLACK (4.3.5.7) PER
DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.005 TO
0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED

4.214
R0.25 (TYP)
3.339
R0.38 (TYP)

5.494
R2.75 (TYP)

D3243-1
FLAT PATTERN

R0.50
(TYP)

0.500
0.000

6.560
5.810
5.360

0.750
0.500
0.000

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2. GENERAL NOTES

COMPATIBILITY

Compatibility of this installation with the aircraft is the **responsibility of the installer**. Ensure that this installation does not conflict with a previous modification.

CONTINUING AIRWORTHINESS

This installation should be maintained in accordance with the Instructions for Continued Airworthiness ICA-D044-715.

3. INSTALLATION INSTRUCTIONS

To install the Dart Cargo Mirror Installation on the R44 skidtube:

1. Locate the D3243-041 Bracket with approximately 0.38" (10mm) space between the top of the skidtube and the bracket, as shown in Figure 2. Transfer drill the 4 holes from the bracket to the centerline of skidtube and enlarge to 10/64" (Ø0.297"). Deburr holes and wet install ALS7-1032-130 inserts using MIL-P-85582 or MIL-P-23377 primer.
2. Install the D3243-041 Bracket on the skidtube using the AN3 hardware. The bolts should be sealed with Sikaflex-241/-291 or Proseal 890 or MIL-S-8802 Class 'B2' sealant before installing as per Figure 2.
3. Install remaining hardware per Figure 2 as required. Adjust the angle of the D2010-104 Arm and tighten the AN526C1032R10 screws to secure arm.
4. To adjust the mirror: loosen (DO NOT REMOVE) the three adjustment screws shown in Figure 2, reposition the mirror, then tighten the screws.

4. WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D044-715-011 Cargo Mirror Installation	1.3 lb 0.59 kg	41.7 in 1.06 m	54.2 lb-kG 0.63 m-kG	32.0 in 0.81 m	41.6 in-lb 0.48 m-kG

5. PARTS LIST

Qty	Part Number	Description
X	D044-715-011	CARGO MIRROR INSTALLATION
2	D1048	Clamp
2	D1049	Saddle
1	D2010-104	Arm
1	D2011-101	Mirror
1	*D3014-1	Locknut
1	D3243-041	Bracket
4	ALS7-1032-130	Insert (or AKS7-1032-130, AKS4-1032-130, ALS4-1032-130)
4	AN3-4A	Bolt
4	AN526C1032R10	Screw (or AN526-1032R10)
4	AN960JD10L	Washers
1	*AN960JD416L	Washer

* PARTS ARE INCLUDED WITH D2011-101 MIRROR

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Revision: **A**

Date: 04.01.20